

Remarks

Favorable reconsideration of this application, in view of the above amendments and in light of the following remarks and discussion, is respectfully requested.

Claims 1, 2, 6, 7, 11, 15, 19, 22, and 24 are pending in the application; independent Claims 1 and 19 having been amended by way of the present response. Applicants respectfully assert that support for the changes to the claims is self-evident from the originally filed disclosure, including the original claims, and that therefore no new matter has been added.

In the outstanding Office Action the specification was objected to; Claims 1, 2, 6, 7, 11, 19, 22, and 24 were rejected under 35 U.S.C. § 112, first paragraph; Claims 1, 2, 6, 7, 11, 19, 22, and 24 were rejected under 35 U.S.C. § 112, second paragraph; Claims 1, 2, 6, 11, 19, 22, and 24 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 3,560,178 to Minkler; and Claims 1, 2, 6, 11, 19, 22, and 24 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Minkler in view of U.S. Patent No. 3,847,570 to Fulk et al. (Fulk).

Initially, Applicants express thanks for the courtesies extended by Primary Examiner Hoffmann to Applicants' representative during a personal interview on October 4, 2004. In accordance with MPEP § 713.04, Applicants respectfully assert that the following, with the Interview Summary prepared by Primary Examiner Hoffmann, discloses the substance of the interview.

As stated above the specification was objected to as failing to provide proper antecedent basis for claimed subject matter, and Claims 1, 2, 6, 7, 11, 19, 22, and 24 were rejected under 35 U.S.C. § 112, first and second paragraphs. Without conceding to the propriety of the objection and rejections, Applicants have amended the claims to recite features that are discussed in the originally filed specification and shown in the original

figures. Specifically, as discussed during the interview, Applicants respectfully assert that the claimed features of “disposing a wheel . . . to pivot relative to an end of a shaft” is supported by page 8, lines 30-31 of the specification, which states that “[t]he castor 1 [i.e., a wheel] is mounted to pivot on a shaft 4,” and is supported by Figures 1 and 2. As also discussed during the interview, Applicants respectfully assert that the claimed features of “detecting with a magnetic detector a movement of a tab connected to a shaft” is supported by page 9, lines 5-20 of the specification, which states that “[t]he shaft 4 includes . . . a metal tab 7 approximately perpendicular to the shaft 4,” and “when, for example, all of the filaments of the strand 3 have retained their integrity . . . the metal tab 7 is placed opposite the cell 8” while “[o]n the other hand, when such a number of filaments break . . . the metal tab 7 is shifted out of the detection field of the cell 8,” and is supported by Figures 1 and 2.

With respect to the claimed features of “the wheel configured to rotate about an axis that is perpendicular to an axis about which the shaft rotates,” Applicants respectfully assert that support for these features is provided by page 8, line 30 to page 9, line 3, which states that the shaft 4 “pivots with respect to a spindle 5 located in a casing 6,” and that the spindle 5 “is fastened in a manner corresponding to a position . . . [as shown] in Figure 1, with the major axis horizontal.” Further, Applicants respectfully assert that Figures 1 and 2 show the shaft 4 rotating around a horizontal axis, which is perpendicular to an axis of the castor 1.

For the foregoing reasons, Applicants respectfully assert that the objection to the specification and the rejections under 35 U.S.C. § 112, first and second paragraphs, are believed to have been overcome, and therefore Applicants respectfully request that the objection and rejections be withdrawn. In the event that the Examiner believes the objection and rejections have not been overcome, Applicants respectfully request that the Examiner telephone Applicants’ undersigned representative to expedite prosecution with respect to such matters.

As stated above Claims 1, 2, 6, 11, 19, 22, and 24 were rejected under 35 U.S.C. § 102(b) as being anticipated by Minkler, and were rejected under 35 U.S.C. § 103(a) as being unpatentable over Minkler in view of Fulk. Applicants respectfully assert that the amendments to the claims have overcome the rejections for the following reasons.

The present invention is directed to a process for manufacturing a continuous yarn, as well as a method of determining breakage of at least one filament of a yarn. Independent Claims 1 and 19 recite gathering filaments into a yarn with a wheel. The wheel is disposed to rotate and to pivot relative to an end of a shaft, and the wheel is configured to rotate about an axis that is perpendicular to an axis about which the shaft rotates. A magnetic detector is used to detect a movement of a tab connected to the shaft.

Minkler is directed to a fiber producing apparatus with break out control means. As shown in the figures of Minkler, a shoe 16 is attached to and supported on a counter-weighted, pivoted arm 38.¹

Applicants respectfully assert that Minkler does not teach or suggest, however, the claimed features of gathering filaments with a wheel configured to rotate about an axis perpendicular to an axis about which a shaft, to which the wheel is connected, rotates, as recited in independent Claims 1 and 19. Specifically, Applicants respectfully assert that Minkler does not show or state the shoe 16 rotating about an axis perpendicular to an axis about which the pivoted arm 38 rotates, but rather shows the axis of the shoe 16 parallel to the axis of the pivoted arm 38, for example.

Applicants respectfully assert that the claimed features recited in the independent claims can provide numerous advantages. By way of specific non-limiting examples, Applicants respectfully assert that the claimed features recited in independent Claims 1 and 19 can provide a relatively compact structure, in which breakage of a yarn is detected very

¹ Column 2, lines 36-37.

early, so that measures can be taken to avoid problems resulting from the breakage from seriously affecting the process. Applicants respectfully assert that disposing the axis of the wheel perpendicular to the axis of the shaft can provide a much more compact structure as compared to a structure in which the wheel and shaft axes are disposed parallel to one another.

Specifically, independent Claims 1 and 19 recite “disposing the wheel to rotate and to pivot relative to an end of a shaft, the wheel configured to rotate about an axis that is perpendicular to an axis about which the shaft rotates . . . and detecting with a magnetic detector a movement of a tab connected to the shaft.” Thus, Applicants respectfully request that the rejection of independent Claims 1 and 19 under 35 U.S.C. § 102(b) be withdrawn.

The Office Action relies on Fulk in an attempt to remedy the deficiencies of Minkler. Applicants respectfully assert that Fulk fails to remedy these deficiencies, however, for the following reasons.

Fulk is directed to a method and apparatus for processing linear elements. Applicants respectfully assert that Fulk also does not teach or suggest, however, the claimed features of gathering filaments with a wheel configured to rotate about an axis perpendicular to an axis about which a shaft, to which the wheel is connected, rotates, as recited in independent Claims 1 and 19. Specifically, Applicants respectfully assert that Fulk does not show or state gathering filaments with a wheel connected to a rotating shaft, and does not show or state such a wheel configured to rotate about an axis perpendicular to an axis about which such a shaft rotates, for example.

As stated in MPEP § 2143.01, “[o]bviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves.” In this case, Applicants respectfully assert that neither Minkler nor

Fulk provides the required teaching, suggestion, or motivation to produce the claimed invention of gathering filaments with a wheel configured to rotate about an axis perpendicular to an axis about which a shaft, to which the wheel is connected, rotates, as recited in independent Claims 1 and 19. Rather, Applicants respectfully assert that the only motivation for producing the claimed invention is provided by Applicants' disclosure.

Thus, Applicants respectfully submit that a further rejection of independent Claims 1 and 19 in view of Minkler and Fulk would be based on the improper application of hindsight considerations. It is well settled that it is impermissible simply to engage in hindsight reconstruction of the claimed invention, using Applicants' structure as a template and selecting elements from the references to fill in the gaps.² Recognizing, after the fact, that a modification of the prior art would provide an improvement or advantage, without suggestion thereof by the prior art, rather than dictating a conclusion of obviousness, is an indication of improper application of hindsight considerations. Simplicity and hindsight are not proper criteria for resolving obviousness.³ Further, Applicants respectfully assert that the "fact that references can be combined or modified is not sufficient to establish *prima facie* obviousness."⁴ Therefore, Applicants respectfully asserts that an improper "obvious to try" rationale would be required to reject the independent claims in view of a combination of Minkler and Fulk.⁵ Specifically, Applicants respectfully assert that because a combination of Minkler and Fulk do not teach or suggest the desirability of the claimed features of gathering filaments with a wheel configured to rotate about an axis perpendicular to an axis about which a shaft, to which the wheel is connected, rotates, a *prima facie* case of obviousness cannot be made. Thus, Applicants respectfully request the allowance of independent Claims 1 and 19 over Minkler and Fulk.

² *In re Gorman*, 933 F.2d 982, 18 USPQ2d 1885 (Fed. Cir. 1991).

³ *In re Warner*, 397 F.2d 1011, 154 USPQ 173 (CCPA 1967).

⁴ See Heading under MPEP 2143.01.

⁵ See MPEP 2145 X.B.

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Applicants respectfully assert that Claims 2, 6, 7, 11, 15, 22, and 24 are allowable for the same reasons as the independent claims from which they depend, as well as for their own features. Thus, Applicants respectfully request that the rejections of dependent 2, 6, 11, 22, and 24 under 35 U.S.C. §§ 102(b) and 103(a) be withdrawn, that withdrawn dependent Claims 7 and 15 be treated on the merits, and the allowance of dependent Claims 2, 6, 7, 11, 15, 22, and 24.

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal Allowance. A Notice of Allowance for Claims 1, 2, 6, 7, 11, 15, 19, 22, and 24 is earnestly solicited.

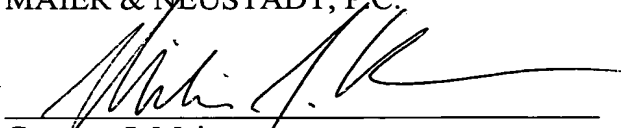
Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact the undersigned representative at the below listed telephone number.

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Respectfully submitted,

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